REMARKS

Claims 8-24 were pending with claims 8 and 18 being independent. The Office Action indicates that all pending claims 8-24 stand rejected as being obvious over Bader (U.S. Pat. No. 6,542,934) in view of Egoshi (U.S. Pat. No. 6,163,526). In this response, Applicant has amended independent claims 8 and 18 for clarity and focus, and made corresponding amendments to their respective dependent claims. Additionally, Applicant has cancelled claims 10-12 without prejudice and added new claims 25-26 for consideration by the Examiner. No new matter has been added and all of the foregoing claim amendments are fully supported by the specification as-filed.

The claimed invention is directed to safely and efficiently restoring traffic in an optical network from a secondary circuit (i.e., a protection circuit or reset circuit) to a primary circuit (i.e., a working circuit) following the failure and recovery of the primary circuit. For example, consider a primary circuit that connects two optical transport nodes (Node A and Node B) in an optical network. After a failure of the primary circuit, the network will try to recover the circuit. However, there can be situations where the primary circuit is only partially recovered (e.g., the primary circuit has recovered in one direction but not in the other direction). In such cases, switching back to the primary circuit before it has fully recovered in both directions would result in further fault protection switching, thereby causing additional traffic interruption. Among other advantages, the claimed invention avoids these problems by employing a two-step recovery process to ensure that the primary circuit has fully recovered before switching back to the primary circuit.

Claim 8 stands rejected as being obvious over Bader in view of Egoshi, but has been amended to incorporate the limitations of its former dependent claims 10-12, which are now cancelled. In addition, claim 8 is now directed to a transport network element in a network

system. This amendment does not add new matter, but instead, enhances clarity and more particularly points out the subject matter for which patent protection is sought.

The cited references are distinguished from the claims. The claimed invention provides a system and method for restoring traffic in an optical network. However, the primary reference, Bader, is directed to, and teaches, *post-recovery* activity (i.e., what happens after the recovery of the primary traffic circuit is complete). The secondary reference, Egoshi, is directed to, and teaches, *pre-recovery* activity (i.e., what happens when the primary traffic circuit fails). Neither of the cited references teaches or suggests, alone or in combination, the recovery activity.

More particularly, claim 8 recites an agent that controls the traffic selector to switch between the primary traffic circuit and the secondary traffic circuit, as well as the activation and deactivation of the secondary traffic circuit. As amended, claim 8 recites that the agent is configured to "switch the traffic selector to receive traffic on the primary traffic circuit, and send a RevertRequest message to the remote agent to request the remote agent to deactivate the previously activated secondary traffic circuit responsive to detecting that the failure on the primary traffic circuit no longer exists." In other words, once the agent at the first transport network element (i.e., Node A) detects that the primary circuit is restored, the agent for Node A signals an agent in the remote transport network element (i.e., Node B) at the other end of the circuit with a "Revert Request Message." If the primary circuit is also restored in the other direction, the agent in the remote node (i.e., Node B) will respond with a Revert message to allow the agent at Node A to release the secondary circuit. The cited references do not teach or suggest this limitation, alone or in combination.

Bader, the primary reference, discloses a method of re-routing traffic in a network from a secondary network path back to a primary network path after the primary path has recovered and is once again available for traffic. However, any similarities between claim 8 and Bader end there. Bader does not teach or suggest, or even hint at, a method by which the primary network

path is recovered. Instead, as evidenced in the following passage, Bader merely accepts (and necessarily relies on the fact) that full recovery will occur. This fact is demonstrated in Bader's statement that:

> [a]ccording to the teachings of the present invention, <u>once the network control hardware/software determines that the primary network communications path has been reactivated and is again available</u>, all existing "transferrable communications sessions" are rerouted to the primary network communications path from the secondary network communications path.

Bader, col. 8, ll. 19-25 (emphasis added). There are no checks in Bader to ensure that the primary network path has recovered in both directions before the nodes in Bader return to communicating on that path. This is because Bader is not concerned with how (or if) such checks are performed. Instead, Bader is concerned with what happens *after* the primary network path is restored.

More particularly, the core teachings of Bader define what type of communication sessions to transfer from the secondary network path to the primary network path once the primary network path has been recovered. Those that can be transferred "non-disruptively" (i.e., "non-disruptively re-routable" and "non-disruptively terminable" communication sessions) are returned to the primary network path when it has recovered. *Bader*, col. 8, ll. 29-65. Any "non-transferrable" communication sessions will remain communicating over the secondary network path until they naturally terminate. *Bader*, col. 9, ll. 21-36.

The Office Action identifies specific passages of Bader to support the contention that Bader teaches sending a RevertRequest message, as claimed. However, the cited passages do not support the contention. Nor do they teach or suggest the resultant behavior caused by the claimed RevertRequest and Revert messages. Rather, the only control messaging behavior specified in Bader is the quiesce message. According to Bader, the "quiesce" message "identifies the secondary path to the HPR control hardware/software," or "instructs the control resources to prevent any new sessions from using the secondary path by assigning all such

sessions to the primary path." *Bader*, col. 10, ll. 12-51. This message is not used to request and separately confirm a request to deactivate a secondary circuit, as claimed. Nor does Bader teach or suggest that it is.

Therefore, Bader does not teach or suggest the specifics of recovery of the network communication paths. In contrast to claim 8, Bader is directed to, and teaches, *post-recovery* activity. And the secondary reference, Egoshi, does not remedy this deficiency because it teaches what occurs upon the detection of a failure (i.e., *pre-recovery* activity). Specifically, Egoshi discloses a method of switching communications from a primary, working channel to a secondary, protection channel, and is cited for its alleged teaching of a traffic selector and a split module. *See Office Action*, pp. 3-4. Egoshi does not teach or suggest, "an agent configured to … switch the traffic selector to receive traffic on the primary traffic circuit, and send a RevertRequest message to the remote agent to request the remote agent to deactivate the previously activated secondary traffic circuit responsive to detecting that the failure on the primary traffic circuit no longer exists." Moreover, the Office Action does not allege that it does.

Therefore, neither Bader nor Egoshi alone teaches or suggests the agent of claim 8. And since neither reference alone teaches or suggests the above-cited limitations of claim 8, any combination of the references also fails to teach or suggest this limitation. Accordingly, the cited references do not render claim 8 or its dependent claims obvious.

Claim 18 is directed to a corresponding method of operating a transport network element and stands rejected as being obvious over Bader in view of Egoshi for reasons similar to those stated above. Claim 18 recites language to that of claim 1, and therefore, is non-obvious over the cited references for reasons similar to those stated above.
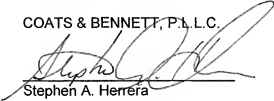
Finally, new claims 25-26 are directed to a corresponding network system having a transport network element. Claim 25, which is the independent claim, recites language similar

to that of claim 1. Therefore, claims 25-26 are non-obvious over the cited references for reasons similar to those stated above.

In light of the foregoing amendments and remarks, Applicant respectfully requests allowance of all pending claims.

Respectfully submitted,

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